

AG-CP3-0026

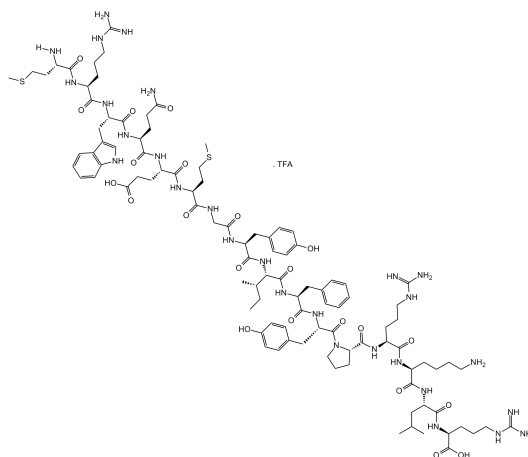
29-Apr-2015

MOTS-c (human)

[H-Met-Arg-Trp-Gln-Glu-Met-Gly-Tyr-Ile-Phe-Tyr-Pro-Arg-Lys-Leu-Arg-OH . TFA; Mitochondrial Open Reading Frame of the 12S rRNA-c; MOTS3]

AG-CP3-0026-M001 1 mg
AG-CP3-0026-M005 5 mg

Formula $C_{101}H_{152}N_{28}O_{22}S_2 \cdot C_2HF_3O_2$
MW 2174.6 . 114.0
CAS 1627580-64-6



Handling / Storage

Shipping AMBIENT
Short Term Storage +4°C
Long Term Storage -20°C

Keep cool and dry.

Use / Stability

Stable for at least 1 year after receipt when stored at -20°C.

MSDS available at www.adipogen.com or upon request.

Product Specifications

Sequence H-Met-Arg-Trp-Gln-Glu-Met-Gly-Tyr-Ile-Phe-Tyr-Pro-Arg-Lys-Leu-Arg-OH
Source/Host Synthetic.
Purity ≥95% (HPLC)
Appearance Solid lyophilized powder.
Solubility Soluble in water.

Product Description

- Mitochondria-derived peptide (MDP).
- Promotes biosynthesis of the endogenous AMP analog AICAR and consequently AMP-activated protein kinase (AMPK).
- Induces cellular and systemic glucose uptake and improves insulin sensitivity. Shown to prevent diet-induced obesity (DIO) in mice.
- Potential anti-obesity and anti-aging compound.
- Involved in cellular stress resistance by regulating the nuclear genome. During metabolic stress (serum or glucose deprivation or oxidative stress) translocates to the nucleus in an AMPK-dependent manner. In the

WARNING: Intended for research use only. This product is not intended or approved for human, diagnostics, therapeutic or veterinary use. Use of this product for human or animal testing is extremely hazardous and may result in disease, severe injury, or death. **MATERIAL SAFETY DATA:** Review the complete Material Safety Data Sheet before use.

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nucleus, MOTS-c binds to the transcription factor NRF2 that is a stress-responsive transcription factor and activates anti-oxidative stress genes.

Product Specific References

1. A mitochondrially encoded hormone ameliorates obesity and insulin resistance: K. Zarse & M. Ristow; Cell. Metab. **21**, 355 (2015)
2. The mitochondrial-derived peptide MOTS-c promotes metabolic homeostasis and reduces obesity and insulin resistance: C. Lee, et al.; Cell. Metab. **21**, 443 (2015)
3. The mitochondrial-encoded peptide MOTS-c translocates to the nucleus to regulate nuclear gene expression in response to metabolic stress: K.H. Kim, et al.; Cell Metab. **(Epub ahead of print)** (2018)

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